4.9 Hazardous Materials/Public Safety

Information contained in this section is summarized from the *Phase I Environmental Site Assessment for 111 Calexico Place* prepared by HDR, Engineering (HDR, 2006). This document is provided in Technical Appendices - Volume II of II, Appendix G of this EIR. Additional information has been added regarding potential uses associated with chlorine gas used at the nearby Heber Geothermal Power Plant.

4.9.1 Existing Conditions

The objective of the Phase I Site Assessment was to evaluate potential environmental impacts to the project site from hazardous substances and wastes currently or formerly located on the site or within the vicinity of the site, in accordance with CEQA. Existing hazardous material conditions are addressed through a review of environmental records through Environmental Data Resources (EDR) for a one-mile radius from the project site; examination of aerial photographs for available periods (1996 only); and, an on-site inspection of the project site and a vehicular reconnaissance of the surrounding area.

Currently, the project site is vacant and was previously plowed agricultural fields. There is very little vegetation remaining on the site as a result of being previously plowed or mowed. There are drainage structures along the northern and northwestern portion of the site. Additionally, there is a concrete brow ditch along the western and southern boundaries that appears to have been used to deliver water to the agricultural fields. In addition, there are tile drains located beneath the former irrigated land that assist with directing the infiltrated drainage water to the Strout Drain which is located north of the project site. The tile drains were used to remove excess water to maintain groundwater below the root systems of crops and remove soluble salts and compounds leached from the soil during irrigation. The surface expression of this drain couldn't be identified on the project site; however, the Strout Drain continues north of Jasper as an earthen-lined drainage, flowing north, and eventually to the Salton Sea.

Sanborn Fire Insurance Maps are large-scale maps depicting the commercial, industrial and residential sections of various cities across the United States. Since the primary use of the fire insurance maps was to assess the buildings that were being insured, the existence and location of fuel storage tanks, flammable or other potentially toxic substances, and the nature of businesses are often shown on these maps. As discussed in the Previous EIR, no Sanborn Fire Insurance Maps are available for the project site due to the rural and undeveloped nature of the site (City of Calexico, 2001).

The following provides a summary of the existing hazardous materials conditions of the project site.

4.9.1.1 Hazardous Materials

On June 12, 2006, HDR Engineering, Inc. conducted a reconnaissance of the project site. The reconnaissance consisted of the observation and documentation of the existing site conditions and nature of the neighboring property development. The following provides a summary of the site reconnaissance.

Storage of hazardous or regulated substances was not observed on the project site. Evidence of manufacturing involving the use or storage of hazardous materials was not observed at the project site.

A. Storage Tanks

Evidence of underground storage tanks (USTs) (i.e., vent lines, fill or overfill ports) and aboveground storage tanks (ASTs) were not observed on the project site.

B. Polychlorinated Biphyenyls (PCBs)

Evidence of PCBs was not observed on the project site.

C. Waste Disposal

The project site is undeveloped, however, there has been various materials left at the project site. Such materials include furniture near the northwest corner of the property and a few empty paint cans on the eastern boundary of the project site. The waste identified during the site visit does not appear to have the potential to contaminate the site since all the materials were dry and solid (HDR, 2006). In addition, there are other areas of the project site that have wind blown trash on the ground. However, this trash is not anticipated to cause any potential contamination of the project site.

D. Drums/Other Chemical Containers

Evidence of drums or other chemical containers were not observed on the project site.

E. Dumping

Evidence of major waste dumping was not observed on the project site. As stated in Section C above, there are selected areas where solid waste has been dumped at the edges of the project site. There areas appear to result from "midnight dumping," but appear to be household-related materials such as furniture, etc. It is not anticipated that the material identified during the site visit would result in contamination of the project site (HDR, 2006).

F. Pits, Ponds, Lagoons, Septic Systems, Wastewater, Drains, Cisterns, and Sumps

There is evidence of a cistern on the western side of the project site and of a sump on the northern boundary of the project site. Both the cistern and the sump are related to water delivery and drainage at the project site. During the site visit it did not appear that either of these appurtenances would be related to hazardous waste or contaminate the project site (HDR, 2006).

G. Pesticide Use

Pesticides were not observed on the project site. However, based on past agricultural use, it is likely that pesticides and herbicides were used on the project site. There is no indication of quantities of materials previously used on the project site, therefore, there is no way to determine if these materials persist in the soils without conducting soil sampling.

H. Staining and Discolored Soil

Staining and discolored soils were not observed on the project site.

I. Stressed Vegetation

Stressed Vegetation was not observed on the project site.

J. Lead Based Paint

There are no structures identified on the project site that would contain lead based paint.

K. Radioactive Waste

Evidence of any radioactive waste was not observed at the project site.

4.9.1.2 Environmental Database Search

Hazardous materials occurrences on or within a one-mile radius of the project site were identified by EDR through a search of selected governmental environmental databases. The project site was not listed on the database searches. However, three hazardous waste sites located within a one-mile radius of the project site were identified. The following provides a brief summary of these sites. A detailed discussion on the identified sites is provided in the Phase I Site Assessment (HDR, 2006) (Technical Appendices - Volume II of II, Appendix G of this EIR):

- According to the Environmental Protection Agency's Comprehensive Environmental Response, Compensation, and Liability Information System, (CERCLIS) one hazardous waste site was identified 3/4 mile southeast of the project site. Based on the distance from the project site and groundwater flowing to the south, it is not anticipated that this site would impact the project site.
- Based on a review of the CERCLIS-No Further Remedial Action Planned (NFRAP) list, as provided by EDR, one hazardous waste site, which has been archived, is located within approximately one mile of the project site. Based on the fact that this site has been archived and the distance from the project site, the hazardous waste site is not anticipated to impact the project site.
- The State Water Resources Control Board (SWRCB) maintains a list of information pertaining to reported leaking underground storage tanks (LUSTs) in the state. The database search identified one LUST facility within one-mile of the project site. This site has been abandoned and the case has been closed, as such this site will not impact the project site.

In addition, numerous unmapped listings were reported. Based on the information provided in the database report, their location to the project site, it appears that these unmapped sites are not likely to impact the project site.

4.9.1.3 Soil Conditions

The U.S. Soil Conservation Service has compiled maps of surface soil conditions based on a thirteen year study 1962-1975. The Soil Survey maps were published in 1981 and indicate that surficial deposits at the project site and surrounding area consist predominately of silty clay and silty clay loams of the Imperial soil group. These loams are formed in sediment and alluvium of mixed origin (Colorado River overflows and fresh-water lakebed sediments). Based on the Unified Soil Classification System presented in the Soil Survey Report, the permeability of these soils is expected to be low to very low.

Geotechnical investigations indicate that the subsurface soils consist primarily of silty clay to a depth of 40 feet, with a 5-foot thick silty sand layer at about 20 feet below ground surface.

4.9.1.4 Groundwater Conditions

As is the case with most locations in the Imperial Valley, the groundwater in the area is brackish and is encountered at a depth of 8 to 12 feet below the ground surface. Depth to groundwater may fluctuate due to localized geologic conditions, precipitation, irrigation, and drainage and construction practices in the region. Based on the regional topography, groundwater flow is assumed to be generally towards the north in the project site area. Flow directions may also vary locally in the vicinity of the site.

Additionally, groundwater depth is influenced by the subsurface agricultural tile drainage system within the project site, which is designed to maintain a 5 to 6-foot groundwater depth. Abandonment of this system with development of the project site may cause a rise in groundwater levels.

The U.S. Geologic Survey, at the request of IID, performed a "one-time" water quality study of 27 irrigation dams throughout the Imperial Valley during the summer of 1994. Review of the study results indicate that the drains sampled contained less than the regulatory limits of arsenic, selenium and nitrates for drinking water. Based on this study it is highly unlikely that contaminated groundwater exists on the project site.

4.9.1.5 Calexico International Airport Comprehensive Land Use Plan

The closest airport to the proposed project site is the Calexico International Airport, which is approximately 2.1 miles south of the project site. The Calexico International Airport is located just west from the southern center of the City. It is on the south side of the New River along Anza Road, approximately 1/2 mile north of the U.S.-Mexico border and approximately 3/4 mile west of State Highway 111. According to the Imperial County Airport Land Use Compatibility Plan, the land boundary associated with the Calexico International Airport use plan extends to within approximately 0.8 mile of the project site. The proposed project site is not located within a Flight Activity Zone or Runway Protection Zone.

4.9.1.6 Emergency Plans

The Safety Element of the City of Calexico General Plan addresses emergency operating procedures and evacuation routes for the General Plan Area. The City is surrounded by open and unpopulated areas with two major evacuation routes, State Routes 111 and 98, both leading to Interstate 8 (City of Calexico, 2007).

Imperial County has an Emergency Plan that addresses Imperial County's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and nuclear defense operations. The County Emergency Plan focuses on potential large-scale disasters that can generate unique situations requiring unusual responses. The Emergency Plan also identifies the sources of outside support which might be provided by other jurisdictions, state and federal agencies, and the private sector through mutual aid and specific statutory authorities.

Local emergency preparedness plans serve as extensions of the California Emergency Plan and the Emergency Resource Management Plan. The Imperial Valley Multi-Agency Hazardous Materials Response Team is available to respond to hazardous materials emergencies throughout Imperial County. The Calexico Fire Department addresses the City of Calexico's planned response to extraordinary emergency situations associated with natural disasters, major chemical incidents. The operational concepts reflected in

the response team focus on potential large-scale disasters that can generate unique situations requiring unusual emergency responses (City of Calexico, 2007).

4.9.1.6 *Fire Hazard*

The project site is currently vacant and undeveloped land. Adjacent land uses include agriculture, commercial, industrial, and vacant land. The City has a low risk of damage from wildfires. The undeveloped areas surrounding the project are either irrigated farmland or sparsely- vegetated desert land. Therefore there is little risk from wildfires due to lack of fuel.

The City currently has two existing fire stations; a main station and a substation. The main station is located at 430 East 5th Street, and the substation is located at 900 Grant Street. There is currently a proposal to build a new station in vicinity of Meadows Road and Cole Road, approximately 1.25 miles from the project site.

According to the Imperial County Natural Hazard Disclosure (Fire) Map prepared by the California Department of Forestry and Fire Protection (2000) the project site does not fall into an area characterized as either: (1) a wildland area that may contain substantial forest fire risk and hazard, or (2) very high fire hazard severity zone (City of Calexico, 2007).

4.9.1.7 *Public Safety Risk*

As discussed in Section 4.4 Air Quality of this EIR, the Heber Geothermal Company (HGC) Power Plant facility is located approximately 0.50 mile northwest and upwind of the project site. Regulatory agencies examining the geothermal power plant facility found no detectable levels of arsenic compounds, beryllium, bromide compounds, cadmium compounds, hexavalent chromium, copper, lead compounds, mercury, nickel, radon, or selenium compounds in the return circulating water. The HGC facility emits small amounts of gaseous pollutants (hydrogen sulfide (H_2S), ammonia (NH_3), and benzene (C_6H_6), which may be unhealthful and/or cause a nuisance. However, such emissions are regulated and monitored at both the Federal and State level, including the ICAPCD. Such emissions are within the operator's permitted authority to emit.

A risk assessment was conducted in 1994 by the ICAPCD in accordance with guidelines provided by the California Air Pollution Control Officers Association (CAPCOA). The CAPCOA risk assessment required that the community health hazard be represented by a Maximum Exposed Individual (MEI). An MEI is defined as a resident continuously exposed (24 hours per day for 7 days a week) for a 70-year lifetime at an offsite residence maximally impacted by facility emissions.

4.9.2 Impact Thresholds

For purposes of this EIR, a significant Hazards Materials/Public Safety impact would occur if implementation of the proposed project would:

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*

- *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
- *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;*
- *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;*
- *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project site;*
- *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people or residing or working in the project site;*
- *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or,*
- *Expose people or structures to a significant risk of loss, injury or death involving fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.*

4.9.3 Impact Analysis

4.9.3.1 Hazardous Materials

No prior uses (other than the agricultural use described above) were identified that are associated with the manufacture, use or storage of hazardous materials on the project site. However, the proposed commercial highway uses could potentially handle hazardous materials. Onsite use and storage of hazardous materials would be limited to small amounts of everyday commercial use cleaners, common chemicals used for landscaping and maintenance, and other common chemicals. It should be noted that any development on the project site that proposes to store and/or use materials considered potentially hazardous would be required to comply with all applicable federal, state and local laws pertaining to the handling, storage, transport, disposal, and use of such materials. Such compliance would include, but would not be limited to: meeting all requirements of the City's Fire Department's Uniform Fire Code (UFC) as they relate to the City's Combustible, Explosive and Dangerous Materials (CEDMAT) Inspection Program; maintaining accurate Material Safety Data Sheets (MSDS) on-site to provide information about chemicals and clean up/disposal methods in case an accidental spill occurs; and, providing remediation of all accidental spills consistent with County Department of Health Services, Metropolitan Sewerage System Industrial Waste Program and the City's Fire Department regulations and procedures. Any hazardous wastes that would be transported off-site for disposal would be required to comply with regulations governing the disposal of hazardous waste during construction and operation of the project. Therefore, impacts associated with the temporary use, storage or transportation of hazardous materials for are not considered significant. This issue is considered less than significant.

No prior uses (other than the agricultural use described above) were identified that are associated with the manufacture, use or storage of hazardous materials on the project site. In addition, no known leaking underground storage tanks or other sites where hazardous materials are known to have been used or stored are located in proximity to the project site such that migration of contaminants to the site via soil or groundwater is considered likely. Therefore, no impacts associated with the upset or accident conditions involving the release of hazardous materials into the environment is anticipated. No impact to this issue area is anticipated.

No known leaking underground storage tanks or other sites where hazardous materials are known to be used or stored exist at the site. Therefore, impacts associated with removal of underground storage tanks would not occur. No impact to this issue area is anticipated.

The nearest established school, Kennedy Gardens Elementary, is located approximately one mile to the southeast of the project site and no schools are proposed within 0.25 miles of the project site. Moreover, the project will be required to comply with applicable federal, state, and local laws pertaining to the handling, storage, transport, disposal, and use of such materials. No impact to this issue area is anticipated.

4.9.3.2 Soil Conditions

Pesticides were not observed on the project parcel. However, based on past agricultural use, it is likely that pesticides and herbicides were used on the project site. As discussed in the Calexico International Center EIR, residues of currently available pesticides and currently banned pesticides such as DDT/DDE may be present in near surface soils within the project site (City of Calexico, 2001). The near-surface soils most likely contain trace residue of pesticides used on the fields from years of agricultural use (City of Calexico, 2001). In accordance with applicable federal, state and local regulations, prior to development of the project site a soil sampling shall be done to determine if the soils on the site are contaminated. If the soils are found to be contaminated, the soils will be required to be remediated in accordance with federal, state, and local regulations prior to construction of the site. Compliance with the federal, state, and local regulations regarding potentially contaminated soils will reduce this impact to a level less than significant.

4.9.3.3 Groundwater Conditions

As discussed in the Previous EIR, based on the water quality study that was prepared by the U.S. Geologic Survey of the irrigation dams, it is highly unlikely that the groundwater on the project site is contaminated. However, given the past uses of pesticides on the project site and the elevation of groundwater in the site area, construction activities associated with development within the site area have the potential to require dewatering, which could result in significant impact from contaminated ground water (City of Calexico, 2001). With the implementation of Mitigation Measure HM1, this issue is considered less than significant.

4.9.3.4 Calexico International Airport Land Use Plan

As discussed above, the project site is not located within a Flight Activity Zone or Runway Protection Zone associated with the Calexico International Airport. No impact to this issue area is anticipated.

4.9.3.5 *Emergency Plans*

The proposed project will comply with the Imperial County Emergency Plan, which addresses extraordinary emergency situations. The proposed project will not impair implementation or physically interfere with any adopted emergency response plans or emergency evacuation plans. No impact to this issue area is anticipated.

4.9.3.6 *Fire Hazard*

As discussed above, the project site does not fall into an area characterized as either: (1) a wildland area that may contain substantial forest fire risk and hazard, or (2) very high fire hazard severity zone. Furthermore, the City of Calexico General Plan designates the City as having a fire hazard rating of 5 (out of 10), with a low risk of damage from wildfires (City of Calexico, 2007). Therefore, development of the proposed project site would not expose people or structures to significant risk of loss, injury or death involving wildland fire. This issue is considered less than significant.

4.9.3.7 *Public Safety*

As discussed in the Calexico International Center EIR, the proposed project site is not located within or adjacent to a designated crash hazard zone, a floodway or a brush-filled canyon (City of Calexico, 2001). However, as noted in Section 4.9.1.7 above, the project site is located less than a half-mile from the Heber Geothermal Power Plant that emits small amounts of gaseous pollutants (hydrogen sulfide, ammonia, and benzene). Such emissions are within the operator's permitted authority to emit and are regulated and monitored at both the Federal and State level.

A risk assessment was conducted in 1994 by the ICAPCD in accordance with guidelines provided by the California Air Pollution Control Officers Association (CAPCOA). The CAPCOA risk assessment required that the community health hazard be represented by a Maximum Exposed Individual (MEI). An MEI is defined as a resident continuously exposed (24 hours per day for 7 days) for a 70-year lifetime at an offsite residence maximally impacted by facility emissions.

The proposed project is the development of a Casino and commercial highway development. No residential uses are proposed to be developed on the project site. Therefore, there is no planned site use under the proposed project that would logically have a 70-year, 365 day/year, 24-hour/day outdoor exposure assumed in the risk assessment as the threshold for a significant impact of the HGC Plant. Since a MEI would not experience significant excess caner risk or acute health risk from the proposed project, employees and patrons would not experience significance excess cancer risks or acute health risk (employee and patron exposure would be less than that of a MEI; i.e., less than 24 hours per day, 7 days per week, for 70 years). Therefore, a less than significant impact is identified for this issue area.

In an abundance of caution, the following describes the potential for a catastrophic release of chlorine at the HGC Plant affecting the project site is provided below. Based on historical chlorine releases in the State of California, a catastrophic release affecting the project site is unlikely. The California Office of Emergency Services (OES) is the state agency responsible for tabulating reported incidents of hazardous materials releases. Any local, state or federal agency involved in responding to release incidents is

required to report the data to OES. From July 1986 to December 1987, there were 43 chlorine incidents, and from January to December 1989, 42 chlorine incidents were reported for the state. These incidents may have been the result of vehicle collisions during transport, mechanical failure, intentional acts, operational deficiencies, misuse of hazardous materials, fire or explosion, or design, construction or installation deficiencies. Of all hazardous materials releases reported to the OES, 37 percent occurred on roads, freeways and railroads, while 48 percent occurred at fixed facilities. Of the 42 chlorine incidents reported in 1989, 17 persons were injured, and 43 persons required decontamination. No deaths were reported (City of Calexico, 2001). Based on prevention and response programs in place at the geothermal power plant and the historically low statewide incidence rate for chlorine, it is unlikely that a catastrophic incident related to the HGC Plant would occur. However, the finite but small possibility for a chlorine release exists; therefore, impacts are considered potentially significant. With the implementation of Mitigation Measure HM2, this is issue is considered less than significant.

4.9.4 Significant Impacts

Significant hazardous materials impacts identified for the project site include the following:

1. dewatering impacts due to high groundwater in the project site; and,
2. public safety risk.

With the compliance with the federal, state, and local laws regarding required testing and remediation of contaminated soils, a less than significant impact is identified for the presence of contaminated soils on the project site.

Potential impacts associated with temporary use and storage of hazardous materials for construction are not considered significant.

No impact is identified related to safety hazards associated with airports and airstrips and risks of wildland fires. In addition, the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, these issues are not considered significant.

4.9.5 Mitigation Measures

HM1 Prior to issuance of the first grading permit, site-specific geotechnical studies shall be conducted to provide detailed analysis and recommendations for dewatering activities in conformance with federal, state and local regulations, to the satisfaction of the City Director of Public Works. Effluent derived from dewatering activities shall meet discharge requirements for National Pollution Discharge Elimination System (NPDES) permitting and/or City of Calexico sewer system discharge.

HM2 Prior to the issuance of certificates of occupancy, the developer shall consult with community agencies regarding emergency response coordination related to chlorine releases at the Heber geothermal plant, and prepare and implement an emergency response plan to be used if chlorine gas releases occur at the geothermal plant, to the satisfaction of the City of Calexico. Subsequent

111 Calexico Place property lessees shall be responsible for implementation of the emergency response plan.

4.9.6 Conclusion

Implementation of the Mitigation Measures HM1 and HM2 would reduce all identified significant impacts associated with contamination sources, dewatering activities and public safety risk to a level less than significant.